

“Evolution of FAA Fire Safety R&D over the Years”

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In the 1940's and 50's FAA research was focused on issues related to powerplant fire protection. As the inherent fire safety of jet turbines became evident, the emphasis changed to postcrash fire survivability and the role of interior materials in aircraft fire safety, highlighted by accidents in the 60's and 70's. The 80's ushered in new or restarted old programs, such as antimisting kerosene, fire blocking layers and low heat release cabin panels, as FAA expanded its fire test capabilities. In the late 80's research became more international in scope, with better cooperation and coordination of programs (such as passenger smoke hoods and cabin water spray), which continues today as evidenced by this conference. Because of several catastrophic accidents, research changed dramatically in the 90's, with emphasis on in-flight fire safety and fuel tank explosion prevention. Today, research continues on in-flight fire prevention and fire fighting, and the future direction appears to be primarily driven by new technology and aircraft designs, such as lithium batteries, composite structure, very large transport airplanes and fuel cells.